2010-02

Human Systems Integration Newsletter ; February 2010

Monterey, California. Naval Postgraduate School

Newsletter of the Human Systems Integration Program at the Naval Postgraduate School, January 2009.

Human Systems Integration Newsletter
February 2010

HSI Certificate Program Registration is Open for July 2010 Start!

We are pleased to announce that registration is open for the next offering of the NPS Distance Learning HSI Certificate Program! The program begins the 1st week in July and consists of four graduate-level courses. One course is offered each academic quarter (summer, fall, winter, spring).

Students who successfully complete all four courses receive an NPS Certificate in Human Systems Integration and thirteen graduate credits. ***The application deadline is 4 June, 2010***.

How do you apply? Anyone interested in applying should go to the following website:

http://www.nps.edu/dl/Cert_Progs/HSI.asp

The site contains a link to the online admissions packet. Prospective students apply to NPS and annotate on their application that they are enrolling in the HSI Certificate Program (Curriculum 262). In addition to completing the online application, prospective students must also arrange for NPS to receive official transcripts from all previous undergraduate and graduate institutions and a command endorsement letter. The letter should state that the command approves of the enrollment and will pay tuition costs.

What are the requirements? Successful applicants will have:

- Baccalaureate Degree
- GPA of 2.2 or better
- Two or more pre-calculus courses with B or better average
- Completion of DAU ACQ 101 and ACQ 201A

(Waivers may be considered.)

Who is eligible? The following people are eligible to enroll:

- US Military Officers
- US Government Civilians (GS)
- Enlisted Personnel
- DoD Contractors
- Selected International Officers

What will you learn? A lot!

In OA3411 (Intro to HSI) you'll learn about the policies that govern HSI and the domains that comprise HSI.

In OA3412 (HSI in the Acquisition Process) you'll learn what HSI practitioners do throughout the acquisition process—and how they do it.

In OA3413 (HSI Tools, Trade-offs, and Processes) you'll learn about the tools, techniques, approaches, and methods that HSI practitioners use on a regular basis.

In OA4414 (HSI Case Studies and Applications) you'll systematically step through an acquisition program and apply what you've learned during the previous three courses.

Apply now!
Seats are limited.

HSI Faculty Attend INCOSE Meeting

Dr. Nita Lewis Miller and ***Dr. Larry Shattuck*** travelled to Phoenix, AZ in the beginning of February to attend the International Council on Systems Engineering (INCOSE) Human Systems Integration Working Group (HSIWG).

Unfortunately, this meeting coincided with one of the many snow storms that have hit the east coast this winter. Many of the people that were planning to attend were stuck in airports or at home - including the chair of the working group, ***Jen Narkevicius***.

Undaunted by the meteorological challenge, Jen enlisted former HSIWG chair ***Steve Deal*** (Booze, Allen, Hamilton), who was able to escape Dayton, Ohio before the storm hit. After some initial technological challenges, those of us in Phoenix were able to hear and see presentations from people on the east coast and even Europe!

Several interesting presentations were given, including the following:

- ***Donna Rhodes*** (MIT), "Overview of US AFHSIO Sponsored Research on Economics Based Human Systems Integration."

- ***Anne Bruseberg*** (SEA Ltd) discussed the MoD Architectural Framework and recent work on the "Human View."
- ***John Columbi*** (AFIT) "HFACS and HSI Domains: An Application of Empirical Requirements Elicitation Using Mishap Data."

Larry Shattuck and ***Nita Miller*** also provided an update on the NPS MS in HSI and HSI Certificate Programs. All of these presentations should be available on the INCOSE HSI Working Group website in the near future.

Update on HSI Certificate Program Course 3

The past few weeks of Course 3 (Tools, Techniques, Approaches, and Methods (TTAMs) in HSI) have flown by quickly. Students have observed demonstrations of many of the resources available to HSI practitioners. They have also received some practical experience in the course: learning how to use electronic research resources, making concept maps, exploring tradeoff methods, and learning about the HSI tracking tools being developed by the Navy, Army and Air Force (HARPS, META, and the USAF Status Board). They have also been introduced to the NPS TTAM Rating System which allows students to assign a rating to various TTAMs across the Defense Acquisition Lifecycle—and then compare their ratings to those of their classmates.

Course 3 has introduced students to a wide variety of TTAMs, including Structured Interviews, Hierarchical Task Analysis, Goal-Directed Task Analysis, Task and Functional Decomposition, Mission Analysis, IMPRINT, SAFTE and the Fatigue Avoidance Scheduling Tool.

For the final project of the course, each student will devise a strategy for his/her own organization (e.g., USAF, USCG, USMC, USN, NASA) that addresses what TTAMs to employ, when to use them, and who will do it—all in relation to the acquisition strategy of their organization.

The students have been doing a tremendous job on their assignments and we want to showcase their work! We have begun discussions with Ryan Stuart, our NPS "Web Mistress", on a way to share this information with the HSI community using some new features on our website.

HSI Student Spotlight

USAF Capt Eric Phillips is set to graduate in June! Eric arrived at NPS in July 2008 and has been doing great things ever since.

His thesis develops and documents an executable process description of Human Readiness Levels (HRLs) to enhance the existing Technology Readiness Level (TRL) measurement currently being used within the Integrated Defense Acquisition, Technology, and Logistics (IDAT&L) Life Cycle Management System.

Technology maturity measurement tools, such as the TRL serve as systematic measurement systems that describe the maturity of a particular technology and allow consistent comparison of maturity between different types of technologies. Throughout DoD acquisition programs, TRLs are used as entry and exit criteria for transitioning milestones and are integral components to program risk management structures.

His proposed HRL measurement framework will add clarity to the technical readiness assessments by emphasizing the socio-technical attributes of systems. HRLs aim to reduce technology risks related to the human element by ensuring HSI is included during technology maturity evaluations. By capturing human-related components of evolving technologies, the acquisition and Science & Technology communities will decrease operational and development risks associated with insufficient HSI.

Eric has been provided outstanding support throughout the thesis process by members of the 711th HPW, and, in particular, ***Bob Lindberg*** and ***Hector Acosta***. Hector is also serving as a co-advisor and is one of the original architects of the HRL concept in the USAF.

USN LT Andi Phillips recently had one of those "once in a lifetime" experiences, courtesy of the "Women in Aviation" conference held in Orlando in late February. Not only did she get a chance to listen to several outstanding presentations and network with fellow female aviators, she also had a chance to meet some of the original WASPs (Women Airforce Service Pilots).

LT Andi Phillips with three of the original WWII WASP pilots in Orlando.

Created in August 1943, the WASP organization was a pioneering group of civilian female pilots employed to fly military aircraft under the direction of the United States Army Air Forces during World War II. The female pilots numbered in the thousands, freeing male pilots for combat service and duties.

The Nation's Premier
HSI Program

HSI Program Mission

The Human Systems Integration (HSI) program at NPS provides graduate education and training to military and civilian personnel, giving them the knowledge, skills, and abilities needed to be effective leaders in the assessment, design, testing, and management of HSI activities throughout the total acquisition lifecycle.

Faculty

HSI faculty are widely published and actively engaged in teaching and research. Faculty span the disciplines of Human Factors, Operations Research, Systems Engineering, Computer Science, Manpower, Personnel, Training, and Business Management.

Our faculty are highly informed about (and in many cases directly involved in the development of) the latest HSI policies, tools, and processes. They interact regularly with HSI leaders from all DoD uniformed services and with other Federal agencies such as NASA and the Department of Homeland Security.

In addition, HSI experts throughout the U.S. regularly speak with students and faculty about current HSI issues, challenges, and solutions. These practitioners provide students and faculty with real world HSI problems that are addressed in discussions and course projects throughout the Certificate Program.

Contact Information:

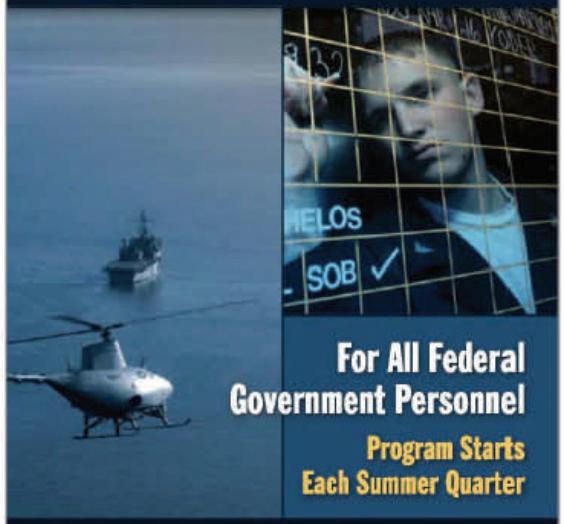
Human Systems Integration (HSI) Curriculum
Naval Postgraduate School
Operations Research Department
Monterey, CA 93943
(831) 656-2473 DSN: 756-2473
HSICertProg@nps.edu

For more information about HSI at NPS:
www.nps.edu/or/hsi

For more information about other DL programs at NPS:
www.nps.edu/dl

Produced by:
Naval Postgraduate School
Center for Educational Design, Development, and Distribution
411 Dyer Road, Knox 102
Monterey, CA 93943
090303

ONLINE HUMAN SYSTEMS INTEGRATION Certificate Program



For All Federal Government Personnel

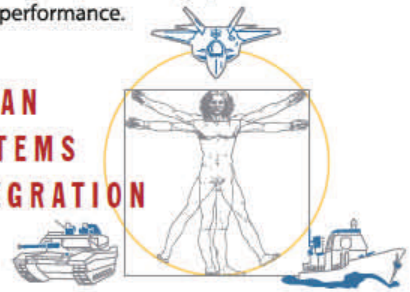
Program Starts Each Summer Quarter

NAVAL POSTGRADUATE SCHOOL

HSI And You

HSI

Human Systems Integration (HSI) acknowledges that the human is a critical component in any complex system. It is an interdisciplinary approach that makes explicit the underlying tradeoffs across the HSI domains, facilitating optimization of total system performance.



How HSI applies to you

HSI has become a vital aspect in the acquisition of any system. Though HSI is mandated in many organizations, at present, few people have the knowledge, skills, and abilities to perform HSI. This certificate program will equip practitioners with what they need to ensure systems are designed, developed, and deployed with appropriate consideration for human operators, maintainers, and supervisors.

Saves you time and money

This certificate program doubles as a residence quarter. If you choose to continue with your HSI education by enrolling in the resident MS in HSI Program at NPS, you will validate an entire academic quarter of course work.

The HSI/MSSE link

HSI/MSSE is a perfect combination for those who would like to pursue an MS in Systems Engineering (distance learning or resident). The HSI Certificate Program courses will count as your four-course elective track (except for Naval EDOs).

Four Course Program
with Graduate Credit

Courses are taken in the following sequence:

Summer Quarter

OA3411 - Introduction to HSI

You will learn about the policies that govern HSI, the domains that comprise HSI, and the capabilities and limitations of humans in complex systems under a variety of stressful conditions.

Fall Quarter

OA3412 - HSI in the Acquisition Lifecycle

You will learn how HSI practitioners work with developers, designers, program managers, logisticians, and engineers to influence the entire lifecycle of a system—from concept development through the operations and support phase.

Winter Quarter

OA3413 - HSI Tools, Tradeoffs, and Processes

An important task for HSI practitioners is to assist acquisition program leaders in making tradeoff decisions in a resource-constrained environment. This course will provide you with the theories and tools to help you help them make informed decisions.

Spring Quarter

OA4414 - HSI Case Studies and Applications

You will apply what you have learned in the previous three courses to evaluate historical case studies and to engage in HSI activities in typical acquisition systems.

Getting Started

Eligibility

The following are eligible for this program:

- US Military Officers
- US Government Civilians
- Enlisted Personnel
- International Students*

***International Students:**
Ensure that you read and understand the additional eligibility requirements and application process found here: www.nps.edu/dl/info/intlapps.html.

Prerequisites

Applicants must satisfy the following requirements:

- Baccalaureate degree
- Undergraduate GPA of 2.2 or better
- Two or more pre-calculus courses with B or better average
- Completion of DAU ACQ 101 and ACQ 201A
- Waivers may be considered

Undersea Human Systems Integration Symposium 2010 Call for Papers

"Getting the Best Through Warfighter-System Integration"

July 27-29, 2010
Providence Marriott Downtown, Providence, RI

Call for Papers/Presentations/Panels:
Contributions describing new research in the domain of undersea human-systems integration are being sought for the 2010 Undersea Human-Systems Integration (UHSI) Symposium. The committee has a strong interest in science, research and technology papers. There is also a strong interest in papers that focus on the "integration" of human-systems integration. This includes various undersea research and technology domains including specific:

- Navy communities (sonar, combat control, anti-submarine warfare, mine warfare, etc.)
- Military-application research areas (display design, decision aids, information flow, etc.)
- HSI communities (human factors, training, manpower, survivability, etc.)

We invite interested parties to submit an abstract and optional paper for review and consideration for a presentation or poster at the UHSI 2010 Symposium. The papers will be published in conference proceedings.
You should define your research along one or more of the dimensions described above (with a focus on a specific naval, research, or HSI community) and submit your abstract and optional paper no later than March 31, 2010. It is the responsibility of the authors to obtain clearance/public release approval from their organizations.

Abstracts should include:

- Proposed Title
- Authors Name and Organization
- Primary POC Info (Phone, Email, Address)
- Detailed Paragraph of what the topic addresses (maximum of 300 words for the body text)
- Between 1-3 keywords based on the three dimensions listed above
- What is new and interesting about the research in terms of innovation or interest to a researcher in the human-systems integration domain and to a wider audience interested in undersea technologies in general

Optional papers should:

- Be between 2-5 pages
- Be formatted in a single column according to the American Psychological Association (APA) Style Guide
- Further elaborate on how the methods and results of the reported research are directly relevant to the general undersea community and how they contribute to the body of human-systems integration knowledge

Abstracts should be sent in the MS Word format (or compatible) to:
UHSIPapers@navalengineers.org.

Panel Proposals:
Interested parties may also submit a proposal to organize a panel session. Please have 3-5 speakers in mind for a topic of interest to a broad range of undersea HSI professionals. Please submit proposals directly to Dr. Jason Wong at jason.h.wong@navy.mil.

Direct questions to:
Dr. Jason Wong, Program Planning Committee Chair, at jason.h.wong@navy.mil or
Dr. Yvonne Masakowski, Symposium Committee Chair, at yvonne.masakowski@navy.mil

Important Dates:
31 March 2010 - Abstracts due
31 April 2010 - Notification of acceptance
31 May 2010 - Draft Papers/Presentations due